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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,167	12/16/1999	HIDETO SUZUKI	P/1905-91	7202

7590 05/31/2005

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EXAMINER

MUNOZ, GUILLERMO

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8/11

Office Action Summary

Application No.

09/464,167

Applicant(s)

SUZUKI, HIDE TO

Examiner

Guillermo Munoz

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Remarks page 6-7 of Amendment, filed June 30, 2004, with respect to claims 1-6 have been fully considered and are persuasive. The rejection of claims 1-6 has been withdrawn.

Drawings

The drawings filed on January 16, 2001 is acceptable subject to correction of the following informality: The control signal output to "RECEPTION QUALITY COLLECTOR" has been renumbered 211 on page 17, line 25 of the specification as per amendment submitted December 19, 2003 and needs to be reflected in corresponding Figure 6. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Claim Objections

Claims 1, 3 and 5 are objected to because of the following informalities:

Claim 1 need to be rewritten in such a way as to improve the claim language.

In claim 1; the subject matter "a gain controller coupled to the variable gain amplifier, the gain controller comparing reception characteristics" in lines 6-7, could be improved by rewriting the same as follows.

—gain controller coupled to the variable gain amplifier;

the interference canceller/demodulator unit comparing reception characteristics—

Art Unit: 2637

Examiner suggest the following changes, because

- (i) the interference canceller/demodulator unit is not referred to or defined in the specification as a gain controller.
- (ii) the comparison function performed by the gain controller in the instant application is between a average degree of improvement of the SIR and a threshold, as described on page 20 line 20-to-page 21 line 8.
- (iii) the comparison of signal characteristics is described in the instant application as being performed by the components of the interference canceller/demodulator unit.
- (iv) the interference canceller/demodulator unit is indirectly coupled to variable gain amplifier.

Claim 3 lines 1-4 need to be rewritten in such a way as to improve the claim language.

Claim 3 lines 1-4 should be rewritten as follows:

—A circuit comprising:

a variable gain amplifier whose gain is controlled by a first control signal from an AGC controller; and

DS-CDMA multi-user interference canceller/demodulator unit comprising:—

In claim 5, line 6 change “cancellation processing” to —cancellation processing;—.

Appropriate correction is required.

Allowable Subject Matter

Claims 1, 3 and 5 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-6 are considered allowable because the present invention comprises an interference canceller/demodulator unit that compares reception characteristics of reception signals received from a plurality of users prior to interference cancellation processing with reception characteristics after the interference cancellation processing and evaluating the comparison result. The closest art, Kamgar et al. (US 6,324,387 B1) teach a circuit for controlling a gain amplifier based on an RSSI/Threshold comparison and a Pilot/Threshold comparison. However, Kamgar et al. fails to teach a interference canceller/demodulator unit that compares reception characteristics of reception signals received from a plurality of users prior to interference cancellation processing with reception characteristics after the interference cancellation processing and evaluating the comparison result. This distinct feature has been included in independent claims 1, 3 and 5 rendering them allowable. Claims 2, 4 and 6 are dependent on allowed claims 1, 3 and 5, respectively, and are thereby indicated as allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

This application is in condition for allowance except for the following formal matters:

Drawings must comply with all Drawing objections, as indicated above, or specifically traverse each objection not complied with.

Claim language must comply with all claim objections, as indicated above, or specifically traverse each claim objection not complied with.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Munoz whose telephone number is 571-272-3045.

The examiner can normally be reached on Monday-Friday 8:30a.m-4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2637

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Guillermo Ming

GM
May 12, 2005

Jean B. Corriellus
JEAN B. CORRIELUS
PRIMARY EXAMINER
5/28/05